

## ABSTRACT

An umbrella valve includes an elastic cap, and an elastic stem formed integrally with the cap, having a center hollow portion, having an enlarged hollow portion proximate the cap, and having a bottom. The valve has a needle having an enlarged head at a proximal end thereof for being snugly secured in the enlarged hollow portion of the stem, having a lower lateral hole in a distal portion, having an upper lateral hole proximate the bottom of the stem, and having a lengthwise center passageway connecting the upper and lower lateral holes. A method includes providing a needle for being snugly secured in one of a plurality of elastic caps, the needle having a lengthwise center passageway connecting upper and lower lateral holes. The method includes selecting a cap from among the plurality of elastic caps by determining opening pressure factors.

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